

REMARKS

The Examiner, Mr. Chen, is thanked for the courtesy extended applicants representatives during the interview of September 27, 2055, during which time proposed amendments to the claims were discussed, noting that the claims have been clarified in relation to the depths and widths set forth in the claims. More particularly, as noted in the interview summary, the Examiner has recognized that the cited art of Sasaki does not disclose the now recited feature of "the projection step portion having a part does not face the upper magnetic portion".

By the present amendment, each of independent claims 38, 44 and 50 have been amended to recite features which overcome the rejection of claims 38-55 under 35 USC 112, first paragraph, including the feature of an upper magnetic pole, as represented by the magnetic pole 17 in Figs. 6 and 7 of the drawings of this application has a first width at an air bearing surface, which is represented by the width T_w as shown in Fig. 6, for example, and a second width which is a maximum width of the upper magnetic pole at a first depth position from the air bearing surface and which is larger than the first width, which is represented by the width $Up1w$ as shown in Fig. 6 and which extends from the air bearing surface to the position of the end of the flaring of the width as shown in Fig. 6, for example, with the corresponding width and depth being present in Fig. 7 to which the present invention is directed. Applicants note that each of independent claims 38, 44 and 50 recite the feature, as illustrated in Fig. 7 of a lower magnetic pole having a lower magnetic layer 5, a lower magnetic pole front end portion 23 on the lower magnetic main layer 5 and a projection step portion 27 on the lower magnetic pole front end portion 23. As now recited in claim 38, for example, the projection step portion includes one portion which faces the upper magnetic pole, and which corresponds to that portion of the

projection step portion 27 which is essentially overlapped by the upper magnetic pole 17 including that portion to the left of the dashed line to the right of the lead line for reference numeral 29 in Fig. 7, for example, and another portion which is formed so as to extend from a second depth position from the air bearing surface, as represented by the depth Std, as shown in Fig. 7 to a third depth position from the air bearing surface, which would correspond to a depth from the air bearing surface to the end of the projection step portion, as shown in Fig. 7, and having a part which does not face the upper magnetic pole, as represented by the part 29 to the right of the dashed line as shown in Fig. 7, for example, and which extends by the width Stw as shown in Fig. 7, which projection step portion part 29, as described at page 38, lines 11 - 14 of the specification, serves to absorb the leakage flux, and serves to reduce the leakage flux from the upper magnetic pole front and layer which is concentrated in the vicinity of the end portion of the floating surface of the lower magnetic pole front end portion which increases the medium in-plane magnetic field in the off-track position. The leakage flux is absorbed by the projection step portion part 29 so as to reduce the increase in the medium in the plane magnetic field in the off-track position, and thereby obtain the improvements and advantages as described at page 38 et. seq. of the specification. As further described in claim 38, a distance from the air bearing surface to the second depth position represented by the depth (Std) is shorter than a distance from the air bearing surface to the first depth position, which is apparent from Figs. 6 and 7 of the drawings of this application for example. Thus, it is readily apparent that claim 38 as amended is supported by the disclosed features of this application as illustrated in Figs. 6 and 7 and applicants submit that the rejection of claims 28 - 55 under 35 USC 112, first

paragraph, should now be overcome and that claims 38 - 55, as amended, should be considered to be in compliance with 35 USC 112, first paragraph.

By the present amendment, claims 44 and 50 have been amended in a similar manner to recite the features of the upper magnetic pole and the projection step portion in which the upper magnetic pole has a first width at the air bearing surface and a second width which is a maximum width of the upper magnetic pole at a first step position from the air bearing surface and which is larger than the first width, and that the projection step portion includes one portion which faces the upper magnetic pole and another portion which is formed from a second depth position to a third depth position from the air bearing surface and having a part which does not face the upper magnetic pole, as represented by the part 29 to the right of the dashed line as shown in Fig. 7. Thus, applicants submit that all claims should be considered to be in compliance with 35 USC 112, first paragraph.

As to the rejection of claims 38 - 55 under 35 USC 102(e) as being anticipated by Sasaki (US 6,624,971), which is newly cited, such rejection is traversed insofar as it is applicable to the present claims and reconsideration and withdrawal of the rejection are respectfully requested. As to the requirements to support a rejection under 35 USC 102, reference is made to the decision of In re Robertson, 49 USPQ 2d 1949 (Fed. Cir. 1999), wherein the court pointed out that anticipation under 35 U.S.C. §102 requires that each and every element as set forth in the claim is found, either expressly or inherently described in a single prior art reference. As noted by the court, if the prior art reference does not expressly set forth a particular element of the claim, that reference still may anticipate if the element is "inherent" in its disclosure. To establish inherency, the extrinsic evidence "must make clear that the missing descriptive matter is necessarily present in the thing described in the

reference, and that it would be so recognized by persons of ordinary skill."

Moreover, the court pointed out that inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.

As pointed out to the Examiner at the interview, while the Examiner refers to Figs. 6 and 12 of Sasaki, as clearly shown in Fig. 13 of Sasaki, the maximum width portion of the upper magnetic pole 27 would occur in the region of T1 as shown in such figure and a projection step portion of the lower magnetic pole is coextensive therewith. Thus, as shown in Figs. 6 and 12 of Sasaki, irrespective of the contentions by the Examiner, the projection step portion while having one portion which faces the upper magnetic pole, does not have another portion which is formed from a second depth position to a third depth position from the air bearing surface and having a part which does not face the upper magnetic pole" which part as described in the specification of this application absorbs the leakage magnetic flux as described at page 38 of this application and provides improved results, as described therein. Additionally, as is apparent, each of claims 38, 44 and 55 further defines that a distance from the air bearing surface to the second depth position is shorter than a distance from the air bearing surface to the first depth position, and as illustrated in Figs. 6 and 12 of Sasaki such feature is also not disclosed or taught in Sasaki. It is noted that the independent claims also recite additional features not disclosed or taught in Sasaki and the dependent claims recite further features not disclosed or taught in Sasaki. Thus, applicants submit that the independent claims and dependent claims, as amended, patentably distinguish over Sasaki in the sense of 35 USC 102 and/or 35 USC 103 and should be considered allowable thereover noting that there is no disclosure or teaching in Sasaki of a part of the projection step

portion which does not face the upper magnetic pole, and which operates to absorb the leakage magnetic flux, as described in the specification of this application. Thus, applicants submit that all claims patentably distinguish over Sasaki and should be considered allowable thereover.

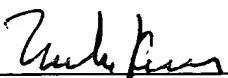
Applicants submit that the dependent claims recite further features which when considered in conjunction with the parent claims, further patentably distinguish over the cited art and should be considered allowable at this time.

In view of the above amendments and remarks, applicants submit that all claims present in this application should be considered to be in compliance with 35 USC 112, first paragraph and to patentably distinguish over the cited art. Accordingly, issuance of an action of a favorable nature is courteously solicited.

To the extent necessary, applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in the fees due in connection with the filing of this paper, including extension of time fees, to the deposit account of Antonelli, Terry, Stout & Kraus, LLP, Deposit Account No. 01-2135 (Case: 520.40591X00), and please credit any excess fees to such deposit account.

Respectfully submitted,

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